

## CLAIMS

The invention claimed is:

1. A probe assembly comprising:
  - 5 (a) a conductive signal contact tip, said signal contact tip arranged for selective engagement with a signal contact pad of a device-under-test;
  - (b) a first signal input port;
  - 10 (c) a resistor having a first port connected to said signal contact tip and a second port connected to said first signal input port; and
  - (d) a second signal input port conductively connected to said signal contact tip.
- 15 2. The probe assembly of claim 1 further comprising a conductive ground contact tip arranged for engagement with a ground contact pad of said device-under-test when said signal contact tip is selectively engaged with said signal contact pad.
- 20 3. A probe assembly comprising:
  - (a) a conductive first signal contact tip, said first signal contact tip arranged for selective engagement with a signal contact pad of a device-under-test;
  - (b) a first signal input port;
  - 25 (c) a resistor having a first port connected to said first signal contact tip and a second port connected to said first signal input port;
  - (d) a conductive second signal contact tip, said second signal contact tip arranged for engagement with said signal contact pad of said device-under-test when said first signal contact tip is engaged with said signal contact pad; and
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- (e) a second signal input port conductively connected to said second signal contact tip.
- 4. The probe assembly of claim 3 further comprising a conductive ground contact tip arranged for engagement with a ground contact pad of said device-under-test when said first signal contact tip is engaged with said signal contact pad.
- 5. A method of testing a device-under-test, said method comprising the steps of:
  - (a) engaging a signal contact pad of said device-under-test with a signal contact tip of a probe testing apparatus;
  - (b) connecting a first port of an impedance matching resistor to said signal contact tip;
  - (c) conducting a direct current to said signal contact tip; and
  - (d) conducting a modulation signal to a second port of said impedance matching resistor.
- 6. The method of claim 5 further comprising the steps of:
  - (a) blocking a flow of said direct current from said signal contact tip to a source of said modulation signal; and
  - (b) conducting said direct current from a source to said signal contact tip over a signal path including an inductor, said inductor having a minimal impedance to said direct current and an impedance substantially greater than said device-under-test at a modulation frequency of said modulation signal.
- 7. The method of claim 5 further comprising the steps of:
  - (a) blocking a flow of said direct current from said signal contact tip to a source of said modulation signal;

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- (b) separating a combined signal on said signal contact tip into a direct current component and a modulation signal component; and
  - (c) terminating a signal path of said modulation signal component.

8. The method of claim 5 further comprising the steps of:
- (a) generating a combined signal comprising a direct current component and a modulation signal component;
  - 10 (b) separating said direct current component of said combined signal from said modulation signal component; and
  - (c) terminating a signal path of said modulation signal component.

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